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WILD TURKEYS

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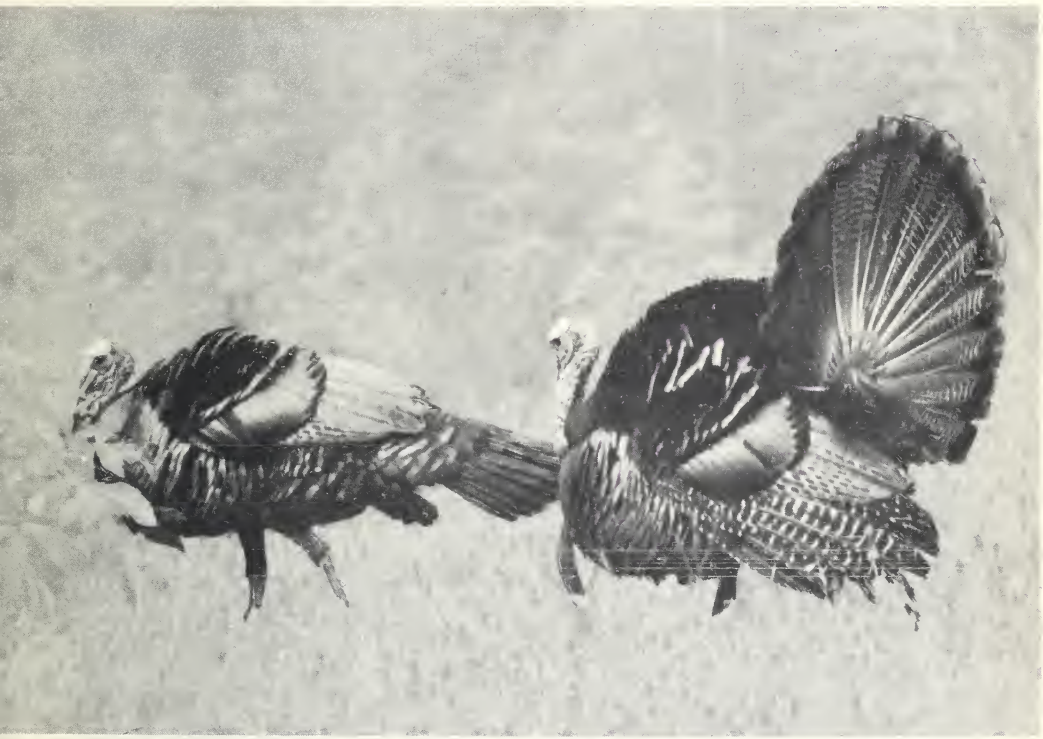
ON SOUTHEASTERN FARMS AND WOODLANDS



U.S. DEPARTMENT OF AGRICULTURE • LEAFLET 526

Wild Turkeys on Southeastern Farms and Woodlands

By Dale H. Arner [1] and Verne E. Davison, *biologists, Soil Conservation Service*

The wild turkey is native to the Eastern and Southwestern States and is the origin of our domestic turkeys. This large game bird stands 3 feet high. Hens weigh from 8 to 12 pounds, gobblers 12 to 20 pounds. Heavier birds are exceptional, and lighter ones are usually poults.

In the Southeast much of the wild turkey range is privately owned, but some is in State and Federal forests and game preserves. Whether the land is under private or public ownership, it can usually be improved for wild turkey habitat.

If you want a high turkey population you will need to manage your land to (1) produce more turkey food in woodland and in open areas; (2) provide dependable and well-distributed drinking water; (3) maintain favorable cover, including suitable roosting trees; and (4) protect the turkeys. This leaflet explains how these can be done.

Natural Habitat of Wild Turkeys

Turkeys are found in extensive woodland areas—usually oak or mixed oak and pine. Good cover for turkeys includes trees 6 or more inches in diameter and at least 30 feet high. The birds roost in trees—usually in the largest ones—and frequently in trees in swamps. Woodland should have an open understory since turkeys do not range well through heavy undergrowth.

Much wild turkey food comes from trees such as oaks, pines, beech, and flowering dogwood. Turkeys also feed in woodland clearings where grasshoppers, crickets, cicadas, and plant foods such as berries, fruits, and grass seeds are abundant. And they feed on the tender green grasses and legumes that grow in clearings. Turkeys drink daily, usually from surface waters.

In a natural woodland habitat a flock of wild turkeys usually ranges over a tract of 5,000 to 10,000 acres. With dependable water sources, choice foods, and good roosting trees, you can attract and maintain a turkey flock on tracts of 500 to 2,000 acres.

A natural turkey range seldom has all of the qualities needed for a high population. How much you improve it depends on what is lacking and how hard you are willing to work.

An improved turkey range of woodland or brushland should be at least 500 acres and include some hardwoods. It should also have a few acres of open land that can be cultivated. Then you can improve the open and wooded areas to provide better food, shelter, and water. If you own a few hundred acres of favorable turkey range next to extensive forest land, your chances of successful turkey production are promising.

Choice Wild Turkey Foods

Wild turkeys feed on acorns, nuts, seeds, fruits, tubers, and greens and on insects and other small animals. In late fall, winter, and spring, wild turkeys prefer: Acorns, beechnuts, chinkapins, chufas, corn, flowering dogwood berries, wild grapes, hickory nuts, seeds of cabbage palmetto and sawpalmetto, pine seeds, and plants that provide green grazing—barley, bromegrass (smooth, rescue, and chess), clover (button, crimson, red, and white), oats, rye, ryegrass, and winter wheat.

In summer and early fall, turkeys pre-

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WARNING: Recommendations for use of pesticides are reviewed regularly. The registrations on all suggested uses of pesticides in this publication were in effect at press time. Check with your county agricultural agent or state agricultural experiment station to determine if these recommendations are still current.

fer blackberries, huckleberries, mulberries, browntopmillet, bullgrass, cowpeas, peanuts, grain sorghums, soybeans, and wheat; seeds of bahiagrass, bullgrass, carpetgrass, yellow-eyed-grass, and woolly croton; and insects such as cicadas, crickets, and grasshoppers.

Planting Food for Wild Turkeys

The food available to wild turkeys can be increased by (1) planting grasses, grains, and legumes and (2) managing woodland to increase natural foods.

Fields of clovers, winter grains, and grasses provide green grazing and nutritious food in late fall, winter, and early spring. The tender blades of these plants are higher in protein than most fruits, nuts, and buds of native trees and shrubs. These fields also provide good summer range where the turkeys can forage for insects as well as grain and weed seeds.

The field you plant for wild turkey food should be at least 1 acre. If you have deer, the field must be larger (2 to 10 acres) in order to feed them also. Some of the largest flocks of wild turkeys in the Southeast have been established and maintained with high deer populations where about 5 percent of the total woodland area is kept in food patches of winter greens.

Clovers. Button, crimson, red, and white clovers (including Ladino) are excellent turkey foods. Clovers can be planted with grasses, oats, or wheat but are more easily managed for turkeys when grown alone. Perennial grasses such as bluegrass, fescue, tall oatgrass, and orchardgrass soon crowd out the clovers in turkey fields. Deer will feed in the same fields with wild turkey. Since the deer prefer the clovers, the grasses soon replace these more heavily grazed legumes.

Inoculate clover seed before planting in a field where clover has never been grown. Use the true clover inoculant for crimson, red, and white and the alfalfa-burclover inoculant for button clover. In fields that have grown clover, inoculation is seldom necessary but phosphate usually is needed for continued vigorous growth.

Seed clovers in the fall by broadcasting. Select the clover best adapted to your soil. Button clover is seeded at 20 pounds of scarified seed per acre, white clover (and its varieties) at 2 to 4 pounds per acre, crimson clover at 20 pounds per acre, and red clover at 10 pounds per acre.

Lime the soil wherever necessary to establish and maintain a pH of 6.0 to 6.5 for crimson and white clover and 6.5 to 7.5 for button and red clover.

Wild turkeys are at home in woodlands, and much of their food comes from trees. (Courtesy of Roger Latham)

Lime again every fourth or fifth year, or when a soil test shows the need.

About 400 to 600 pounds per acre of an 0–12–12, 0–14–14, 2–14–14 fertilizer or equivalent is needed for clovers. About 400 pounds per acre of the same fertilizer will be needed each fall.

Button and crimson clovers are annuals, but you can get early volunteer stands each year by harrowing or disking in August. Red clover requires an early fall disking every second or third year to reestablish a full stand against native grass. White clover is perennial and does not require annual fall disking.

Barley, oats, rye, and wheat. These grains make suitable winter grazing plants for wild turkeys. Use the one best suited to your soil. Prepare the ground and seed and fertilize as you would for any grain crop. Seed clover with the grain if you plan to convert the field to clover after the first year.

Rescuegrass and ryegrass. These grasses provide good winter grazing for wild turkeys. Both are annuals. Prepare the ground well by plowing or disking and harrowing. Broadcast 30 to 40 pounds of rescuegrass or 50 pounds of ryegrass per acre. Fertilize with 500 pounds per acre of 8–8–8 fertilizer or its equivalent. Lime when necessary to keep a pH of 6.0 to 6.5. To maintain rescuegrass and ryegrass, disk the field in August every second or third year. Ryegrass sometimes needs reseeding.

Bluegrass, fescue, orchardgrass, and tall oatgrass. All of these perennial winter grasses are fair turkey foods. Though the perennials are less palatable than the annual winter grasses, they make good ground cover and are useful on steeply sloping land or along roadways where close grazing by deer and turkeys would cause erosion.

Chufa. Chufa nuts are choice turkey food. Chufa is an annual sedge adapted to sandy loam soil and is grown from tubers (nuts). The tubers may be sown in rows up to 42 inches apart and cultivated, or they can be broadcast. Chufa is easier to cultivate when planted in rows. Plant the tubers in May, June, or July, using 30 to 40 pounds per acre.

Fertilize chufa with about 400 pounds per acre of 8–8–8 or similar fertilizer and sidedress with additional nitrogen at the first cultivation.

A small open field of crimson clover can provide winter grazing for wild turkeys to supplement their natural habitat. (Courtesy of Herman Holbrook)

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Borders between fields and woods can be planted to winter-grazing crops.

You can maintain a chufa field by disking and fertilizing it each spring.

Deer, raccoons, and squirrels eat the tubers. Chufa is a hard crop to grow in fields of 1 acre or less if raccoons are numerous or if turkeys feed regularly in summer. Both of them dig the tubers and may destroy the stand by feeding on them in spring and summer. A field of 3 to 5 acres usually withstands turkey grazing. Raccoons that are troublesome can be trapped in accordance with State game regulations.

Bahiagrass. Turkeys strip the seeds of bahiagrass from the ripe seed heads in July, August, or September. One acre of bahiagrass is enough for a flock of turkeys, but the grass must be protected from cattle which also eat the seed heads. Sow 20 pounds of seed per acre in the spring. Drill the seed a half to an inch deep on a well-prepared seedbed. Fertilize with 400 pounds per acre of 8–8–8 fertilizer. Lime as needed to make the pH 6.0 or 6.5.

Cowpeas, millets, peanuts, grain sorghums, annual lespedezas, and soybeans. All of these are choice turkey foods for summer and fall but at these seasons extra food is seldom needed. Small plantings of cowpeas and soybeans usually are destroyed by deer. Grain sorghum attracts blackbirds, cowbirds, grackles, and sparrows, which eat most of the seed. Also, it mildews badly afield in humid weather. Browntopmillet *(Panicum ramosum),* an annual, is the best of the millets. Its value is to hold a turkey flock and feed it in July, August, or September (before the blackbirds flock heavily). You can use peanuts or browntopmillet as a substitute for the perennial bahiagrass.

On field edges near woods unharvested strips of corn, wheat, or other choice turkey food may be left for wild turkeys.

Your soil conservationist can help you select the kinds of grasses, grains, and legumes that grow best in your climate and soil. He can also tell you the best season and method of planting and the kind of fertilizer to use.

Improving Woodlands for Wild Turkeys

Within the woodland itself controlled burning, brush control, thinning trees, seeding grasses and legumes in openings, and leaving food-producing trees and shrubs are ways of providing more food and better feeding conditions for wild turkeys.

Controlled burning

Brush and plant debris can be removed periodically by "controlled burning" or "prescribed burning." These terms mean *carefully planned and executed use of fire.*

No area should be burned more often than once every third year. The best time for burning is January or February, never during the spring nesting season. Controlled burning permits growth of succulent vegetation and better feeding.

For safe burning you must have (1) adequate fire lanes and (2) the correct moisture conditions. Be sure you comply with local fire regulations. Always notify the nearest fire tower and obtain help from experienced persons such as fire wardens, forestry personnel, or managers who know how to burn safely.

Conditions for burning are usually best a day or two after a good rain. It is safest to burn when (1) the pine needles, leaves, and grass can be burned at midday but are too wet to burn in early morning and late evening and (2) the wind direction is expected to remain the same for the 4 or 5 hours of burning. A north wind is most dependable. These conditions can be predicted only a few hours in advance—by your fire warden and weather bureau.

The fire is started on the downwind side of the area to be burned, along a fire lane or road. The fire-setters then ignite the "sides," and then the upwind edge. This completes the burning of the whole area in the least time and before the dampness of evening prevents further burning. A proper burn removes most of the ground litter but leaves unburned the thin layer of mulch that is in contact with the wet soil and therefore too wet to burn. The mulch prevents soil erosion.

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Controlled burning is useful in maintaining good turkey range.

Brush control

A mixture of one part 2,4,5-T to 20 parts of fuel oil is a practical way to remove unwanted brush and trees when applied in late May or early June. Place the solution in frill cuts at the base of the trees to be killed. Where abandoned fields and orchards grow up to such trees as black locust or sassafras, spray 2,4,5-T mixed in fuel oil on the trunk and stems during the winter months. Airplane spraying is not practical, because desirable food trees will be destroyed.

With the removal of the trees, such plants as bluegrass, bromegrass, orchardgrass, and various legumes usually volunteer the following spring from seeds lying in the soil. If choice food plants do not appear after the trees have been killed or removed, you can stir the leaf litter with a spring-toothed cultivator or burn it off; then seed with ryegrass, clovers, orchardgrass, bahiagrass, or whatever species is best adapted to the soils of the area.

Caution: If you use pesticides, apply them only when needed and handle them with care. Follow the directions and heed all precautions on the container label. If pesticides are not handled or applied properly, or if unused portions are disposed of improperly, they may be injurious to humans, domestic animals, desirable plants, honey bees and other pollinating insects, fish, or wildlife, and they may contaminate water supplies.

Thinning trees

Logging and other timber-cutting operations can be planned to create scattered openings in woodlands where choice

turkey foods can be seeded.

Clearings can be opened by (1) bulldozing and windrowing scrub hardwood or (2) pulling a triangular-shaped blade, below ground, which uproots and cuts hardwood stems.

Seeding open areas

In addition to new clearings, turkey foods can be grown in such places as powerline rights-of-way, field borders, abandoned orchards and fields, former sawmill sites, open fields, along woodland roads, and areas that have been bulldozed or burned in preparation for planting pine seedlings.

Leaving food trees and shrubs

Food-producing shrubs and small trees should be left when hardwood is eradicated. The fruits, buds, and leaves of flowering dogwood are excellent turkey foods in fall and winter. The leaf and twig litter of flowering dogwood, which is high in calcium, acts as an antacid buffer to the soil. This soil improvement is important in conifer woodlands.

Wild grapes, blueberries and blackberries, dogwood, honeysuckle, and other fruits such as wild cherries provide lots of turkey food. Leave them especially along roads, streams, and field edges wherever they do not interfere with woodland management.

Food yields from oaks, beech, hickories, wild cherry, dogwood, and other species can be increased by clearing an area 30 to 60 feet square around the tree.

Providing Drinking Water

Turkeys drink water daily. Therefore, dependable year-round drinking water should be well distributed throughout the turkey range. A nesting hen should have drinking water within 400 feet of her nest. When possible, curtail all human activities around the watering places during nesting months.

Ponds and wells with windmills can assure a supply of water. If you do not have enough watering places, your soil conservationist can assist you with impounding more water. During droughts turkeys will leave any range where surface water is not available.

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Clearings such as this powerline right-of-way can be seeded to choice wild turkey food.

Protecting Wild Turkeys

Wild turkeys need protection from some of man's activities, from disease, and from some predators. Illegal or excessive hunting; disturbances during the nesting season; and free-ranging dogs, livestock, and poultry are important factors in preventing turkey increase.

Nesting-season disturbances

Protection is especially necessary during the early nesting season—from March to early May in the Deep South, April through May in the mid-South, and a little later northward. The hen turkey prefers to nest at the edge of openings, such as fields and old sawmill sites and along woodland roads. She often deserts her nest if flushed from it during the 3-week egg-laying period or the first few days of the 28-day incubation period. Whenever possible, stop timbering operations in favorable nesting areas during egg laying and incubation.

Free-ranging livestock

Free-ranging livestock will destroy food plantings and grassy strips. Hogs com-

pete heavily for acorns, beechnuts, and other turkey foods.

A fence to protect a turkey-food patch from livestock may be expensive to build and to maintain. In mixed stands of grasses and clovers, some grazing or periodic mowing after nesting can be beneficial to the clover. Nevertheless, if livestock use is excessive, food patches must be protected with either a barbed-wire fence or a living fence. Woven wire should not be used. It keeps the turkeys out and foxes and dogs can catch turkeys against woven wire.

A living fence of multiflora rose protects food plantings, and the rose hips provide winter food. Locate the rose fence in open sunlight. Plant the seedlings 8 to 12 inches apart and protect them from grazing for the first two growing seasons. Mulch to a 4-inch depth with straw or sawdust and fertilize the first year or two with several applications of a high nitrogen fertilizer. A large deer population may make it hard to establish a multiflora rose fence as deer relish the young growth of the rose seedlings.

Disease

A wild turkey range should be protected from domestic poultry. Chickens or domestic turkeys ranging in fields where wild turkeys feed can spread such diseases as paratyphoid, fowl pox, and blackhead. These diseases are spread from the droppings of infected birds and can quickly become epidemic. Since the soil remains contaminated for a long time, poultry manure should never be spread on fields where wild turkeys range.

The purchase or release of pen-reared turkeys as wild turkeys is not practical. A pen-reared turkey has a poor chance to survive in the wild.

Predators

The wild turkey is able to escape most predators except free-ranging dogs, which are among its worst enemies. Foxes and bobcats seldom prey on wild turkeys.

Raccoons, skunks, and crows destroy turkey eggs. If numerous, these predators can be controlled by trapping and hunting in accordance with State game regulations.

Hunting

Hunting of wild turkeys must be carefully adjusted to their annual increase. About one-third of a fall population can usually be taken safely. If there has been any poaching on your land, the number of turkeys you can safely harvest will be reduced—possibly eliminated.

THINGS YOU CAN DO

- Provide choice turkey foods by planting grasses, grains, and legumes in fields adjacent to woodlands.
- Increase food production in woodlands by controlled burning, chemical brush control, thinning trees, and seeding scattered small openings and clearings.
- Save food-producing trees and shrubs from eradication.
- Provide reliable, year-round sources of drinking water.
- Protect turkeys from excessive hunting, nesting disturbances, poultry diseases, and certain kinds of predators, especially free-ranging dogs.

(Front cover picture: Courtesy of Herman Holbrook)

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